

Miami-Dade County Board of County Commissioners

Office of the Commission Auditor

Legislative Analysis

Board of County Commissioners

Tuesday, August 23, 2005

9:30 AM

Commission Chamber

Charles Anderson, CPA
Commission Auditor

111 NW First Street, Suite 1030
Miami, Florida 33128
305-375-4354

**Miami-Dade County Board of County Commissioners
Office of the Commission Auditor**

Legislative Analysis

**Board of County Commissioners
Meeting Agenda
August 23, 2005**

Written analyses for the below listed items are attached for your consideration in this Legislative Analysis.

Item Number(s)

4(P)	5(H)
5(G)	7(A)
11(A)(3)	

If you require further analysis of these or any other agenda items, please contact Guillermo Cuadra, Chief Legislative Analyst, at (305) 375-5469.

Acknowledgements--Analyses prepared by:

Tim Riera-Gomez, Senior Legislative Analyst
Bia Marsellos, Legislative Analyst
Elizabeth Owens, Legislative Analyst
Douglas Pile, Esq., Legislative Analyst
Jason T. Smith, Legislative Analyst

LEGISLATIVE ANALYSIS

ORDINANCE RELATING TO RULES OF PROCEDURE OF THE COUNTY COMMISSION; AMENDING SECTION 2-1 OF THE CODE OF MIAMI-DADE COUNTY, FLORIDA, TO ELIMINATE ROAD CLOSINGS FROM LIST OF ENUMERATED EXCEPTIONS TO COMMITTEE REQUIREMENT; PROVIDING SEVERABILITY, INCLUSION IN THE CODE AND AN EFFECTIVE DATE

Commissioner Natacha Seijas

I. SUMMARY

The ordinance deletes road closings from the recently adopted list of agenda items that do not require consideration by a committee prior to consideration by the Board.

II. PRESENT SITUATION

Rule 4.01(i) provides that no item can be considered by the Board unless forwarded by a committee. Rule 4.01(j) provides exceptions to the committee requirement.

The exceptions to the committee requirement initially included only items placed on the BCC agenda by the Chairperson of the Board. In 2003, the exceptions were amended in Ordinance 03-43 to provide for direct BCC consideration of quasi-judicial items and special taxing districts. In March 2005, the exceptions were expanded in Ordinance 05-50 to include several items that shall be heard directly by the Board, specifically: ordinances for first reading, consent agenda items, district office fund allocations, special presentations, **road closings**, road codesignations, citizens' presentations, bid protests, settlements and resolutions expressing intent.

The petition for a road closing currently requires a landowner to obtain the signatures of all of the abutting landowners.

III. POLICY CHANGE AND IMPLICATION

The ordinance deletes road closings from the recently adopted list of agenda items that do not require consideration by a committee prior to consideration by the Board. Road closings must be considered by a committee prior to consideration by the Board, as they were earlier this year. Otherwise, Rule 4.01(j) retains all the other exceptions from the committee requirement for agenda items.

IV. ECONOMIC IMPACT

None.

V. COMMENTS AND QUESTIONS

None.

LEGISLATIVE ANALYSIS AND ECONOMIC IMPACT STATEMENT

***GOVERNMENTAL FACILITIES HEARING FOR FIRE RESCUE STATION #51
COMMUNICATION MONOPOLE INSTALLATION GF05-01.***

General Services Administration

I. SUMMARY

This resolution authorizes the building and operation of a monopole at Fire Rescue Station #51, 4775 N.W. 199th Street, in District 1.

- Attachment 1 – Streetscape rendering facing North.
- Attachment 2 – Streetscape rendering facing West.

II. PRESENT SITUATION

On April 14, 2003, the Board of County Commissioners approved the purchase of a Motorola 450 MHZ radio system for the Miami-Dade County Fire Department (MDFR), through Resolution 394-03.

After an analysis by Motorola, Electronic Services Technology Department (ETSD) and MDFR, it was determined that to support the new radio system the number of antenna sites would need to be increased from 25 to 39; and five of these sites would require the building of new monopoles. On June 7, 2005, the Board of County Commissioners approved the installation of three new monopoles at Stations #4, #9 and #36. The City of Miami Gardens will consider in October the application to erect the fifth monopole at Station #54, 15250 N.W. 27th Avenue.

Once all five monopoles are installed and the system upgrade is complete, the UHF system will replace the 28-year-old analog microwave system, which is no longer supported by the manufacturer.

III. POLICY CHANGE AND IMPLICATION

None.

IV. ECONOMIC IMPACT

Installation of this monopole will cost \$154,000. The entire UHF system will cost \$15 million and will come from the Fire District debt.

V. COMMENTS AND QUESTIONS

The answers to the following questions were provided by staff from the Miami-Dade Fire Dept.

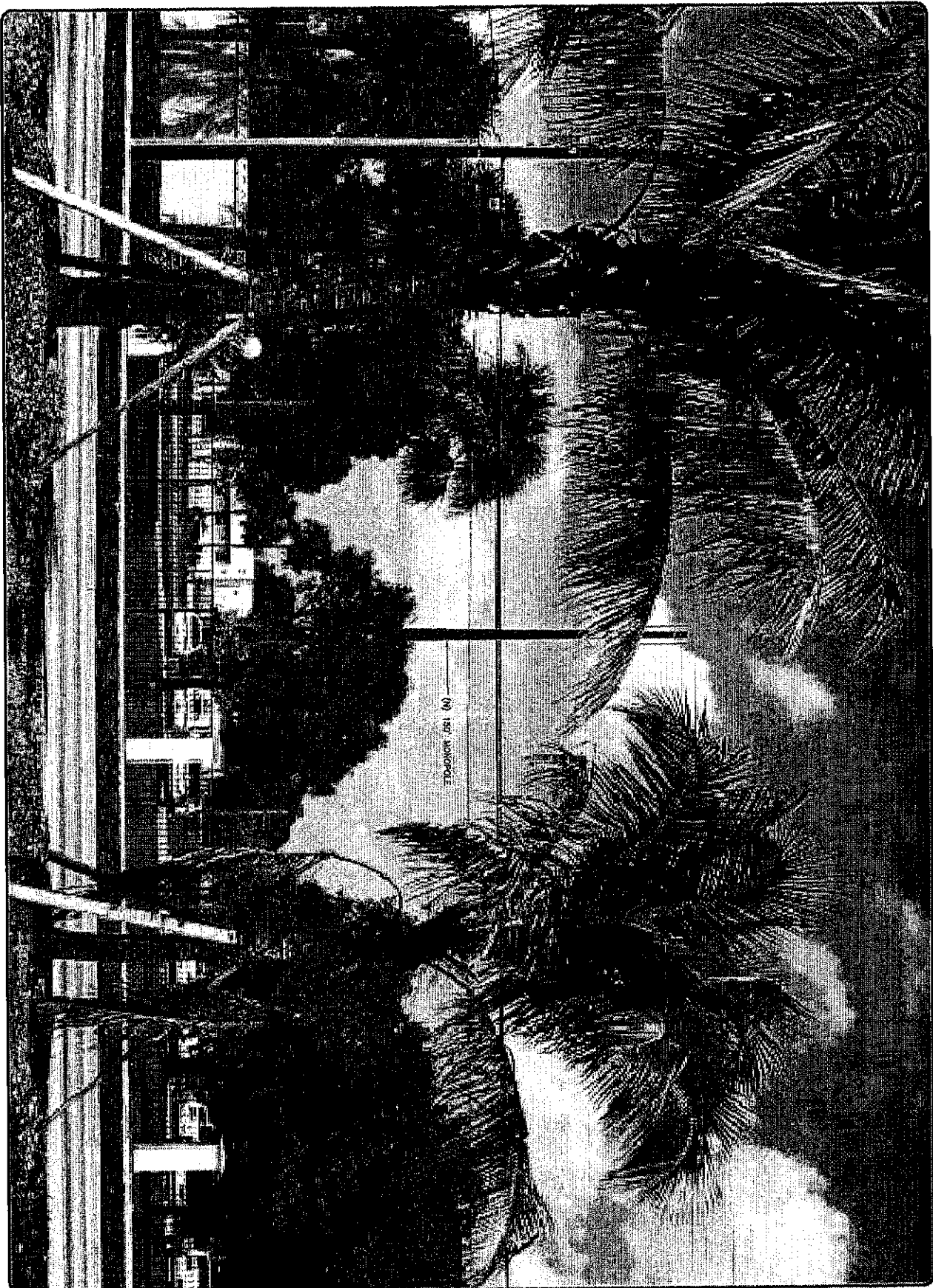
- Is this monopole designed solely for one purpose or could this monopole be used to provide other communication services, such as support a cell phone network?

Answer: This monopole was designed to support the antennas that are needed to satisfy the in-building penetration coverage of the New MDFR UHF Radio System. A limited amount of additional load capacity was included in the monopole design to support future build-out of the MDFR UHF network, a potential new microwave system for redundancy, or some other Public Safety-related communications solution. The monopole was designed to allow co-location with other public safety agencies or municipalities only.

- Has ETSD or the Fire Department looked into utilizing other existing antennae in the area that could service the new 450 MHz System? Has the department looked into co-locating with private industry, if so what was the outcome?

Answer: Yes. MDFR partnered with ETSD and Motorola to design and install the new MDFR UHF Radio System over many months. The goal was to design a radio system that will improve the coverage across Miami-Dade County and greatly enhance the in-building penetration capability up to 21 dB in highly populated areas, which is substantially higher than the capability that MDFR has today. In order to accomplish this goal, Motorola informed us that we needed to increase the number of sites from 25 to 39. We first tried to re-use as many of the existing sites as possible. Some of the existing sites are County sites, and others are leased sites. We then looked around specific geographical locations that were identified by Motorola where new sites needed to be built to provide the specified coverage improvement. In some cases, we were able to identify commercial lease sites. In others, we identified County sites, such as the Fire Stations and 800 MHz radio co-located sites. Depending on the required antenna height per location, we selected rooftops, existing towers, or identified new monopoles that needed to be built, such as this one at Fire Station 51. The outcome of this in-depth radio design analysis was: the sites increased from 25 to 39; out of the 39 sites 22 are existing sites and 17 are new sites; 19 are County (including 6 MDFR sites) and 20 are lease sites. The lease sites are sometimes co-located with other municipalities/Public Safety agencies/governmental agencies (12 sites), and private industries (8 sites).

Attachment #1



MOTOROLA
SOLUTIONS DIVISION
3000 ALABAMA AVENUE, N.E.
ATLANTA, GEORGIA 30329
PHONE: (770) 470-4000
FAX: (770) 470-4000



MACTEC
MACTEC ENGINEERING &
CONSULTING, INC.
1000 N. W. 10TH STREET
MIAMI, FL 33136
TEL: (305) 833-3333
FAX: (305) 833-3333

CONTRACT NO. 8702-01-0113 (01)
PROJECT NO. 8702-01-0113 (01)

1	3/1/00	10% DESIGN
2	3/1/00	20% DESIGN
3	3/1/00	30% DESIGN
4	3/1/00	40% DESIGN
5	3/1/00	50% DESIGN
6	3/1/00	60% DESIGN
7	3/1/00	70% DESIGN
8	3/1/00	80% DESIGN
9	3/1/00	90% DESIGN
10	3/1/00	100% DESIGN
11	3/1/00	110% DESIGN
12	3/1/00	120% DESIGN
13	3/1/00	130% DESIGN
14	3/1/00	140% DESIGN
15	3/1/00	150% DESIGN
16	3/1/00	160% DESIGN
17	3/1/00	170% DESIGN
18	3/1/00	180% DESIGN
19	3/1/00	190% DESIGN
20	3/1/00	200% DESIGN

CHECKED BY: M. KERRY

MDR HONEY HILL
STATION 51

FS 51

4275 N.W. 18TH STREET
904 LINDA, FL 33065

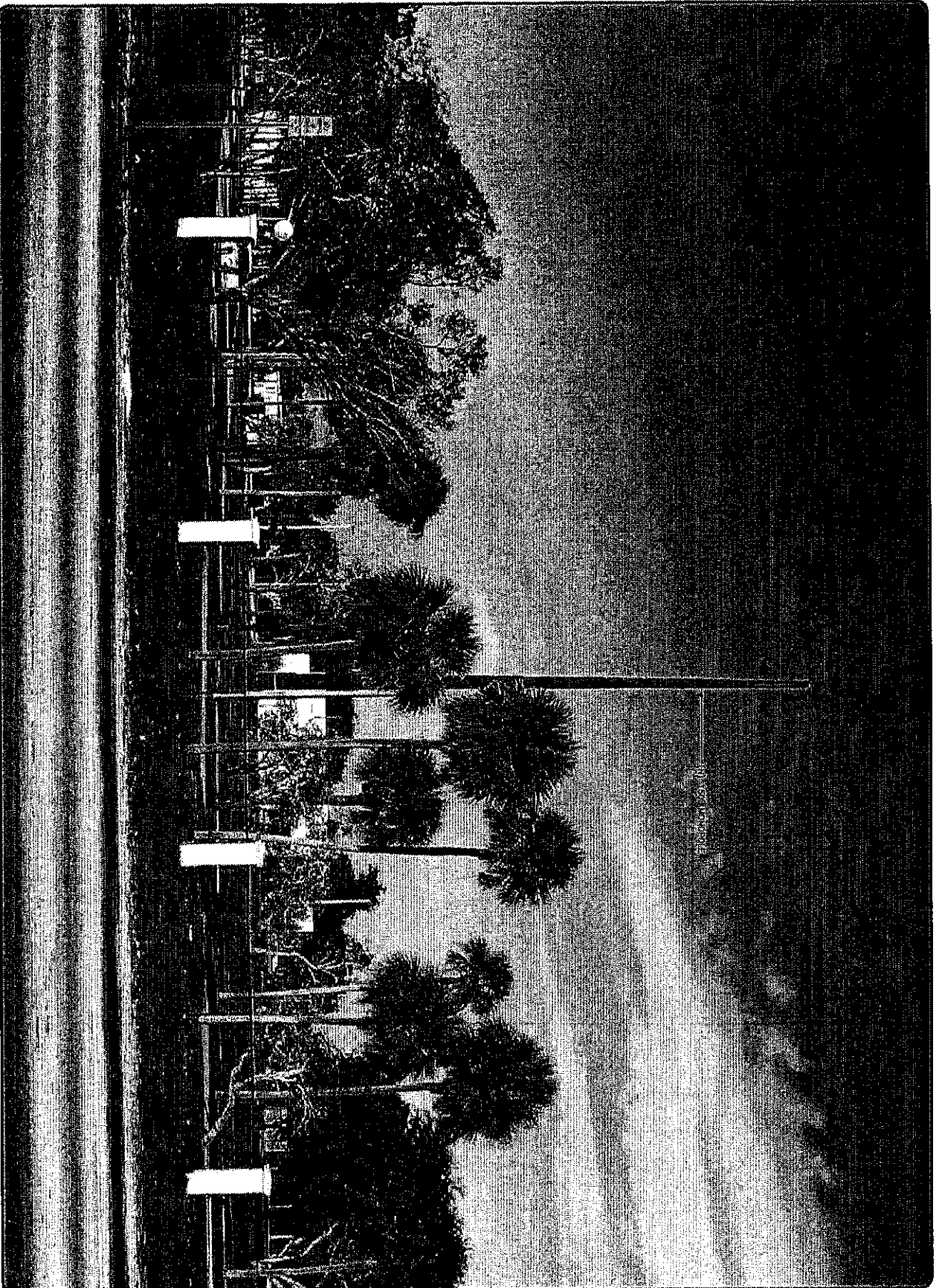
SHEET NAME

PROPOSED STREETSCAPE
PAVING WORK

SHEET NUMBER

PS3

Attachment #2



MOTOROLA
 COMMUNICATIONS
 1000 ALABAMA AVENUE, N.E.
 ALABAMA, GEORGIA 30002
 WIRELESS, 877-873-3867
 FAX (770) 321-4000



MACTEC
 MACITE ENGINEERING &
 CONSULTING, INC.
 1000 ALABAMA AVENUE, N.E.
 ALABAMA, GEORGIA 30002
 TEL (205) 622-6500
 FAX (205) 622-6500

PROJECT NO. 0100-01-0118 (01)
 DRAWING NO. 0100-01-0118 (01)

NO.	DATE	BY	CHKD	DESCRIPTION
1	1/1/00	MAC	MAC	DESIGN
2	1/1/00	MAC	MAC	DESIGN
3	1/1/00	MAC	MAC	DESIGN
4	1/1/00	MAC	MAC	DESIGN
5	1/1/00	MAC	MAC	DESIGN
6	1/1/00	MAC	MAC	DESIGN
7	1/1/00	MAC	MAC	DESIGN
8	1/1/00	MAC	MAC	DESIGN
9	1/1/00	MAC	MAC	DESIGN
10	1/1/00	MAC	MAC	DESIGN
11	1/1/00	MAC	MAC	DESIGN
12	1/1/00	MAC	MAC	DESIGN
13	1/1/00	MAC	MAC	DESIGN
14	1/1/00	MAC	MAC	DESIGN
15	1/1/00	MAC	MAC	DESIGN
16	1/1/00	MAC	MAC	DESIGN
17	1/1/00	MAC	MAC	DESIGN
18	1/1/00	MAC	MAC	DESIGN
19	1/1/00	MAC	MAC	DESIGN
20	1/1/00	MAC	MAC	DESIGN
21	1/1/00	MAC	MAC	DESIGN
22	1/1/00	MAC	MAC	DESIGN
23	1/1/00	MAC	MAC	DESIGN
24	1/1/00	MAC	MAC	DESIGN
25	1/1/00	MAC	MAC	DESIGN
26	1/1/00	MAC	MAC	DESIGN
27	1/1/00	MAC	MAC	DESIGN
28	1/1/00	MAC	MAC	DESIGN
29	1/1/00	MAC	MAC	DESIGN
30	1/1/00	MAC	MAC	DESIGN
31	1/1/00	MAC	MAC	DESIGN
32	1/1/00	MAC	MAC	DESIGN
33	1/1/00	MAC	MAC	DESIGN
34	1/1/00	MAC	MAC	DESIGN
35	1/1/00	MAC	MAC	DESIGN
36	1/1/00	MAC	MAC	DESIGN
37	1/1/00	MAC	MAC	DESIGN
38	1/1/00	MAC	MAC	DESIGN
39	1/1/00	MAC	MAC	DESIGN
40	1/1/00	MAC	MAC	DESIGN
41	1/1/00	MAC	MAC	DESIGN
42	1/1/00	MAC	MAC	DESIGN
43	1/1/00	MAC	MAC	DESIGN
44	1/1/00	MAC	MAC	DESIGN
45	1/1/00	MAC	MAC	DESIGN
46	1/1/00	MAC	MAC	DESIGN
47	1/1/00	MAC	MAC	DESIGN
48	1/1/00	MAC	MAC	DESIGN
49	1/1/00	MAC	MAC	DESIGN
50	1/1/00	MAC	MAC	DESIGN
51	1/1/00	MAC	MAC	DESIGN
52	1/1/00	MAC	MAC	DESIGN
53	1/1/00	MAC	MAC	DESIGN
54	1/1/00	MAC	MAC	DESIGN
55	1/1/00	MAC	MAC	DESIGN
56	1/1/00	MAC	MAC	DESIGN
57	1/1/00	MAC	MAC	DESIGN
58	1/1/00	MAC	MAC	DESIGN
59	1/1/00	MAC	MAC	DESIGN
60	1/1/00	MAC	MAC	DESIGN
61	1/1/00	MAC	MAC	DESIGN
62	1/1/00	MAC	MAC	DESIGN
63	1/1/00	MAC	MAC	DESIGN
64	1/1/00	MAC	MAC	DESIGN
65	1/1/00	MAC	MAC	DESIGN
66	1/1/00	MAC	MAC	DESIGN
67	1/1/00	MAC	MAC	DESIGN
68	1/1/00	MAC	MAC	DESIGN
69	1/1/00	MAC	MAC	DESIGN
70	1/1/00	MAC	MAC	DESIGN
71	1/1/00	MAC	MAC	DESIGN
72	1/1/00	MAC	MAC	DESIGN
73	1/1/00	MAC	MAC	DESIGN
74	1/1/00	MAC	MAC	DESIGN
75	1/1/00	MAC	MAC	DESIGN
76	1/1/00	MAC	MAC	DESIGN
77	1/1/00	MAC	MAC	DESIGN
78	1/1/00	MAC	MAC	DESIGN
79	1/1/00	MAC	MAC	DESIGN
80	1/1/00	MAC	MAC	DESIGN
81	1/1/00	MAC	MAC	DESIGN
82	1/1/00	MAC	MAC	DESIGN
83	1/1/00	MAC	MAC	DESIGN
84	1/1/00	MAC	MAC	DESIGN
85	1/1/00	MAC	MAC	DESIGN
86	1/1/00	MAC	MAC	DESIGN
87	1/1/00	MAC	MAC	DESIGN
88	1/1/00	MAC	MAC	DESIGN
89	1/1/00	MAC	MAC	DESIGN
90	1/1/00	MAC	MAC	DESIGN
91	1/1/00	MAC	MAC	DESIGN
92	1/1/00	MAC	MAC	DESIGN
93	1/1/00	MAC	MAC	DESIGN
94	1/1/00	MAC	MAC	DESIGN
95	1/1/00	MAC	MAC	DESIGN
96	1/1/00	MAC	MAC	DESIGN
97	1/1/00	MAC	MAC	DESIGN
98	1/1/00	MAC	MAC	DESIGN
99	1/1/00	MAC	MAC	DESIGN
100	1/1/00	MAC	MAC	DESIGN

MDR HONEY HILL
 STATION 51
 FS 51
 4120 N.W. 10th STREET
 OPA, FLORIDA, FL 32055
 SHEET NAME
 PROPOSED STREETScape
 PLANNING WEST
 SHEET NUMBER
 PS4

LEGISLATIVE ANALYSIS

ITEM 5 (G) ORDINANCE APPROVING LOAN FROM SUNSHINE STATE GOVERNMENT FINANCING COMMISSION FOR MIAMI-DADE COUNTY SEAPORT DEPARTMENT IN AN AMOUNT NOT TO EXCEED \$75 MILLION.

Seaport Department

I. SUMMARY

This Ordinance authorizes the County to borrow up to \$75 million from the Sunshine State Governmental Financing Commission (Sunshine Commission) for various capital improvements at the Dante B. Fascell Port of Miami.

The Ordinance authorizes the Finance Director, after consulting with the Office of the County Attorney, to approve all final details of the Loan Agreement.

II. PRESENT SITUATION

The Sunshine Commission was created by inter-local agreements among various counties and municipalities in Florida, pursuant to Chapter 163, Part 1, Florida Statutes. The Sunshine Commission enables Governmental Units to benefit from larger scale financing. It also provides a funding mechanism for the acquisition of property, equipment, other capital needs and refunding of higher interest rate debt.

III. POLICY IMPLICATIONS

The Ordinance represents a continuation of the County's policy to finance capital projects at low interest rates through the Sunshine Commission.

IV. ECONOMIC IMPACT

The Loan will be secured by the County's covenant to budget and appropriate from available non-ad valorem County revenues. However, it is anticipated that payment of the Loan will be made from the operations revenues of the Port of Miami.

V. COMMENTS AND QUESTIONS

The capital improvement projects for this loan are:

• Cruise Terminal Improvements	\$ 750,000
• New Cruise Terminal	\$40,000,000
• Cargo terminal Improvements	\$ 500,000
• Port Traffic Circulation Enhancements	\$ 4,000,000
• Channel Dredging Project	\$ 3,400,000
• Security Enhancements	\$ 5,200,000
• Access Road Improvements	\$ 1,450,000
• Container Yard Improvements	\$ 8,000,000

BCC ITEM 5(G)
August 23, 2005

• Port Equipment	\$ 3,000,000
• Cargo Gate Complex	\$ 4,000,000
• Mooring Improvements/Fender Equipment	\$ 500,000
• Comprehensive Parking System	\$ 1,500,000
• Storage Needs	\$ 200,000
• Off-Port Intermodal Container Transfer Facility	\$ 1,000,000
• Maintenance & Administrative Facilities	<u>\$ 1,500,000</u>

Total Loan Request	<u>\$ 75,000,000</u>
---------------------------	-----------------------------

LEGISLATIVE ANALYSIS

ORDINANCE PERTAINING TO ZONING; AMENDING SECTION 33-133 OF THE CODE OF MIAMI-DADE COUNTY, FLORIDA PERTAINING TO RIGHT-OF-WAY PLAN AND MINIMUM WIDTH OF STREETS AND WAYS

Department of Planning and Zoning

I. SUMMARY

This Ordinance will amend Section 33-133 of the Code allowing for the minimum right-of-way for NW 74th Street from the Palmetto Expressway to the Homestead Extension of Florida's Turnpike to be changed from 80 to 126 feet.

II. PRESENT SITUATION

Presently, NW 74th Street between the Palmetto Expressway and the Homestead Extension of Florida's Turnpike is a dirt roadway and the right-of-way allowed is the standard 80 feet.

III. POLICY CHANGE AND IMPLICATION

Miami-Dade County has plans to construct a three lane roadway along NW 74th Street. Once constructed, the Florida Department of Transportation plans to widen 74th Street to a six lane roadway; therefore, the change to a 126 foot official right-of-way is in keeping with the future plans of this area.

Staff is working with the developers of the surrounding properties to set aside enough land to implement the right of way plans.

IV. ECONOMIC IMPACT

There are no economic impacts expected for the County. The roadway is dedicated lands and its construction cost is covered by the land owners as mitigation for development.

V. COMMENTS AND QUESTIONS

During the June 14th INLUC meeting, the Commission requested the County Manager to work with a representative of a private land owner to resolve an issue with FDOT. Prior to the drafting of this ordinance, the land owner was in negotiations with FDOT to purchase 23 feet of the land owner's property for the six lane roadway; however, if this ordinance is enacted, FDOT would not need to purchase the 23 feet. If prior to the implementation of this ordinance, the land owner pulls permits for the development of his property, FDOT would have to acquire the 23 feet. As of August 19, 2005, the issue remains unresolved.

LEGISLATIVE ANALYSIS

RESOLUTION DIRECTING THE COUNTY MANAGER TO CONDUCT A FEASIBILITY STUDY TO EVALUATE POTENTIAL COST SAVINGS THROUGH THE USE OF FLEX-FUEL/"GASOHOL" OR OTHER ALTERNATIVE FUEL SOURCES FOR MIAMI-DADE COUNTY'S VEHICLE FLEET AND TO REPORT SUCH FINDINGS TO THE REGIONAL TRANSPORTATION COMMITTEE (RTC) WITHIN THIRTY (30) DAYS

Chairman Joe A. Martinez

I. SUMMARY

This resolution directs the County Manager to study any potential cost savings that may be associated with the County's use of Gasohol (or Flex-fuel) in County Fleet vehicles.

II. PRESENT SITUATION

Most County fleet vehicles currently run on a 100% petroleum based fuel, either via diesel or traditional octane based gasoline.

In recent years, at the direction of the Board of County Commissioners, the County has introduced more "Hybrid" vehicles into their fleet. These vehicles use traditional gasoline, however combined with an electrical motor, these vehicles realize better fuel mileage. Miami-Dade County currently has 281 Hybrid vehicles in its fleet. The data related to efficiencies, based simply on cost related to fueling these vehicles, is inconclusive. (SEE ATTACHMENT 1)

Flex Fuel

A flexible fueled vehicle (FFV) has a single fuel tank, fuel system, and engine. The vehicle is designed to run on unleaded gasoline and an alcohol fuel (usually ethanol) in any mixture.

Gasohol

Gasohol is a gasoline extender made from a mixture of gasoline (90%) and ethanol (10%; often obtained by fermenting agricultural crops or crop wastes) or gasoline (97%) and methanol, or wood alcohol (3%).

Some communities currently exploring the use of Gasohol and/or Flex Fuels are:

- State of Illinois
- State of Michigan
- Brazil
- India
- China

- State of Tennessee
- The United States' Central Intelligence Agency (CIA)

Brazil is seen as a foremost user of Gasohol vehicles worldwide. (ATTACHMENT 2)

Stations that provide Gasohol and other Flex Fuels are more common in the states known as the "farm belt" or "corn belt". It is not as common in Florida to find Gasohol at commercial fuel stations.

III. POLICY CHANGE AND IMPLICATION

None

The County has already expressed its intention to explore alternatives to strict petroleum consumption vehicles.

IV. ECONOMIC IMPACT

Although Gasohol is not as common in Florida as other states, in states where Gasohol is available, the prices are significantly lower than Gasoline.

The cost of a vehicle that utilizes Gasohol is comparable to the same vehicle which utilizes traditional gasoline.

The County currently pays substantially more for "Electric/Hybrid" vehicles.

The State of Tennessee utilizes Flex-fuel "E-85" Ethanol/Gasoline vehicles. The price per vehicle was approximately \$1,000 more per vehicle than its gasoline only model, however the State received a \$5,000 per vehicle credit from the Federal Government.

There may be additional costs associated with access to Flex Fuel supplies and possible infrastructure costs associated with retrofitting County Service Stations in order to distribute the alternative fuels.

V. COMMENTS AND QUESTIONS

Although Ethanol, Gasohol, E-85, and/or any other alternative fuel derivative are not common in Florida, many of the vehicle models offered can utilize strictly gasoline, strictly ethanol, or any combination thereof.

There are currently approximately 6 million vehicles in the United States that utilize Gasohol products.

BCC ITEM 11(A)(3)

August 23, 2005

A few years ago, Miami Dade-Transit experimented with alternative (ethanol based) fuels in some vehicles. At the time, a variety of obstacles including overheating and maintenance costs precluded MDT from expanding the program further, and the use of these fuels was discontinued.

On August 15, 2002, the Alternative Fuels Advisory Committee presented a list of recommendations to the Board of County Commissioners, which included the implementation of Alternative Fuel vehicles into Miami-Dade's Fleet.



Is a hybrid car worth the gas savings?

Green cars cost more to buy, more to insure, and depreciate faster

By Anne Thompson

Correspondent

NBC News

Updated: 7:30 p.m. ET Aug. 16, 2005

Clay Chandler is looking for his second hybrid, this time an SUV, because as the owner of a Toyota Prius, he's one of the few people smiling at the pump. "It's especially nice when you go into a gas station and everyone else is going past \$30 dollars and mine stops at \$10 or \$11," says Chandler.

That's the promise of these vehicles with electric motors and gas engines — but what's the reality?

David Champion tests cars for Consumer Reports. The government says the popular Prius gets 60 miles a gallon in the city and 51 on the highway. But in real-world driving, Champion, got less.

"We found very similar results on the highway," said Champion, "But instead of 60 miles per gallon we only got 35 miles per gallon in the city. So it's a huge difference."

And not all hybrids are the same. While they started out emphasizing fuel economy — by using the electric motor at low speeds — today, some cars like the Honda Accord hybrid emphasize performance, using the electric motor to boost the gas engine.

"The Honda Accord hybrid gives you almost a second quicker zero to 60, but only gives you maybe 2 miles per gallon overall in terms of your fuel savings," says Champion.

There's more to consider than just gas savings: This technology is expensive — adding \$3,000 to almost \$12,000 to the price.

Automotive analysts say these green vehicles depreciate faster and, because they are more expensive, cost more to insure.

"Hybrids make great sense if you want to make a statement," adds Champion. "If you purely want to save money, they're a little less defensible."

In fact, after crunching the numbers, Edmunds.com found only the Prius saved the buyer money after five years — just \$81 over a conventional Camry.

It doesn't matter to Scott Neal, who's about to buy a hybrid SUV.

"I will have fun driving it," says Neal, "And I will be helping the ecology and keeping pollution down."

And that, he and other hybrid owners believe, makes all the sense in the world.

© 2005 MSNBC Interactive

© 2005 MSNBC.com



Brazil buys into flex-fuel cars

They run on gas, ethanol or any combination

The Associated Press
Updated: 11:35 a.m. ET Aug. 30, 2004

SAO PAULO, Brazil - If it wasn't for the TotalFlex logo on the new Gol subcompacts leaving a sprawling Volkswagen plant, the shiny cars would be indistinguishable from millions already on the road across Latin America.

But these Gols and other models produced by Fiat SpA and General Motors Corp. have modified engines that, given the rising price of oil, are making Brazilians smile at the gas pumps. They run on gasoline, alcohol or any combination of the two and now represent nearly 20 percent of the new cars sold in Brazil.

With alcohol — also called ethanol — cleaner and selling at half the price of gas in South America's largest country, Brazilians who have bought 200,000 "flex-fuel" cars since their launch last year say deciding which fuel to use is a no-brainer.

"Alcohol, all the time," said office manager Roseli Santana as she filled up her 2004 subcompact GM Montana pickup at a Shell station in Sao Paulo, Brazil's largest city and home to 5 million cars. "I was using 52 reals (\$17) of gas every week, now I'm paying 30 reals (\$10) for the same amount, except it's alcohol."

Export goal

Brazil hopes to export flex-fuel cars and technology around the world, and auto industry executives say interest from abroad is increasing. So far, Volkswagen has hosted delegations from Australia, China, England, India, Japan and South Africa.

"They want to know how it works," said Joao Alvarez Jr., the top engineering executive for Volkswagen's Brazil's flex-fuel car lineup, which has the biggest market share. "Gasoline is going to run out someday, everyone knows that."

Engine and assembly line changes to make flex-fuel cars aren't complicated, though the cars come outfitted with a tiny gas-only tank under the hood smaller than a windshield wiper fluid reservoir. It's used to start the car on cold days just for a moment before automatically switching back to alcohol or whatever is in the main tank.

But mass exports of flex-fuel cars aren't likely in the near future, because no other country has an alcohol fuel production and distribution system as advanced as Brazil's. Virtually all the country's service stations offer alcohol.

1970s origin

The idea for non-gas powered cars goes back to the 1970s fuel crisis, when Brazil's economy nose-dived, prompting the country's military dictatorship to launch a campaign to wean the country from expensive, imported oil.

Government subsidies helped fund the design and manufacture of alcohol-only cars. They also supported a vast industry near Sao Paulo to cultivate sugarcane and refine it into alcohol, and an alcohol distribution network that spans a country nearly the size of the continental United States.

Millions of Brazilians switched to the alcohol-only cars in the 1980s, but a 1989 shortage of alcohol left enraged motorists unable to fill up and drive their cars. Falling gas prices in the 1990s added to the end of the country's affair with alcohol-only cars. Last year's sales of alcohol-only cars represented only 3.5 percent of new vehicle sales.

But flex-fuel cars sales took off after the vehicles made it to show rooms last September, totaling 50,000 through the end of 2003. An additional 150,000 were sold from January through June, the latest period for which figures are available.

Infrastructure abroad needed

Other nations like the United States are promoting a fuel mix consisting of 85 percent alcohol and 15 percent gas, but experts say it will take years — if not decades — for true flex-fuel cars to be sold outside Brazil.

"The problem with these flex-fuel vehicles is they need to meet with an established infrastructure," said Cristoph Berg, a commodities analyst with F.O. Licht in Germany. "In the case of Brazil, the fuel was there first."

Some American cars can run on the alcohol-gasoline mix, known as E85, but it's hard to find at the pumps. Most of the efforts of carmakers in the United States on alternatives to gas has been focused on making and marketing hybrid cars with gas and electric engines.

Flex-fuel cars will grab an increasing share of the Brazilian auto market even if gas prices fall because buyers get a viable fuel choice they never had before, said Joao Leite, owner of the Autoinforme Web site focusing on Brazil's auto industry.

"If gas and alcohol are the same price, I'm still going to go for the flex because you never know what will happen in a year or two," he said. "You can't lose with a flex car."

Natural gas version

Other big automakers, like Ford Motor Co., plan to start selling Brazilian flex-fuel cars this year. And GM recently upped the ante on fuel choice for Brazilians, offering a flex-fuel car that also runs on natural gas, widely available at the pumps in Brazil's biggest cities.

Brazilian drivers for years have hired mechanics to install natural gas conversion kits on their cars. But GM's compact Astra is the first to come with natural gas as a factory-installed option, with an extra tank for the fuel in the trunk.

After buying her flex-fuel pickup in January for \$8,300, Santana experimented with mixes of alcohol and gas before settling on pure alcohol. The vehicle's performance is the same on both types of fuel, she says, though it gets slightly fewer miles to the gallon with alcohol. So far, she's saved about \$200 on fuel.

Three of Santana's friends bought flex-fuel cars after she told them she will never go back to a gasoline-powered car, and will only buy gas for her pickup if the price drops significantly.

"I was a little worried about using the alcohol, but there's really no difference," Santana said. "If it ends up costing the same price, maybe I'll just mix the two."

© 2005 The Associated Press. All rights reserved. This material may not be published, broadcast, rewritten or redistributed.